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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/766,814	01/22/2001	Joseph Fjelstad	TESSERA 3.0-115 CONT CIP	2851
530	7590	04/20/2004	EXAMINER	
LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			TUGBANG, ANTHONY D	
			ART UNIT	PAPER NUMBER
			3729	

DATE MAILED: 04/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<b>Application No.</b> 09/766,814	<b>Applicant(s)</b> FJELSTAD ET AL.	
	<b>Examiner</b> A. Dexter Tugbang	<b>Art Unit</b> 3729	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-76 is/are pending in the application.
- 4a) Of the above claim(s) 1-51 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 75 and 76 is/are allowed.
- 6) ☒ Claim(s) 52, 54, 55, 62-68, 72 and 74 is/are rejected.
- 7) ☒ Claim(s) 53, 56-61, 69-71 and 73 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. The applicants' amendment filed 1/28/04 has been fully considered and made of record.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action. The rejections below are maintained and hereby repeated for the applicants' convenience.

### *Election/Restrictions*

3. Claims 1-51 continue to stand as being withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 13.

### *Claim Rejections - 35 USC § 102*

4. Claims 52, 54, 62-68, 72 and 74 rejected under 35 U.S.C. 102(b) as being anticipated by Kanji et al 5,067,007.

Kanji discloses a method of making an microelectronic assembly comprising: providing a connection component 4 including conductive leads and contacts; juxtaposing a first microelectronic element 6 having contacts with a first or top surface of the connection component and attaching the first microelectronic component to the tip ends of the leads (see Fig. 1A); attaching a second microelectronic element 1 having contacts to a back surface of the first microelectronic element; wire bonding the contacts on the connection component with the contacts of the second microelectronic element (see col. 5, lines 63+); and subsequently moving

Art Unit: 3729

the first and second microelectronic elements through a preselected displacement relative to the connection component so as to deform the bonding wires and the leads (see Fig. 1C), which meets all of the limitations of the claimed method.

Regarding Claims 66-68, Kanji further teaches providing an electrically thermally conductive adhesive 9.

### ***Claim Rejections - 35 USC § 103***

5. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kanji et al in view of Japanese Patent Publication JP 2-20032, referred to hereinafter as JP'032.

Kanji discloses the claimed manufacturing method as relied upon above. Kanji does not teach introducing a curable liquid material.

JP'032 teaches introducing a curable material for the purpose of sealing the connection component.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of Kanji by including the curable liquid of JP'032, to positively seal the connection component.

### ***Response to Arguments***

6. Applicant's arguments filed 1/28/04 have been fully considered but they are not persuasive.

In regards to the merits of Kanji et al, the applicants' assert that Kanji does not teach step A of "providing a connection...component" (lines 3-7 of Claim 52), step C of

Art Unit: 3729

“attaching...component” (lines 12-15 of Claim 52), and step E of “after the wire...leads” (lines 20-23 of Claim 52).

The examiner most respectfully disagrees. With respect to step A, the connection component is read as substrate 4 with the claimed “first surface” being read as the top surface of the substrate 4 including leads 7 and contacts 8. The terminal ends and tip ends of the leads 7 can be said to be both “permanently secured” and “releasably secured” to the connection component 4 because the leads are attached by solder to the connection component and the terms of “permanently” and “releasably” are very broad limitations that do not impact the method. The claim does not require how the ends of the leads are “permanently” or “releasably” secured to the connection component. For example, the claim does not recite any active step of releasing the tip ends. The mere attachment of the ends of leads to the connection component can be said to be “permanently” or “releasably” secured, to the extent disclosed by Kanji. It appears that further limitations are needed as to what degree the tip ends must be releasably secured to the connection component to avoid Kanji.

With respect to step C in Claim 52, the claimed “second microelectronic” is read as the wiring board 1 of Kanji and includes contacts 3 to which are connected to a back surface (bottom surface) of a first microelectronic element (chip 6) through the leads 11 and the connection component 4. The contacts 3 of the second microelectronic element 1 face an upward direction toward the bottom surface of the connection component 4, which is away or, *at a distance*, from the first surface (top surface) of the connection component 4. Thus, Kanji fully satisfies the limitations of step C.

With respect to step E in Claim 52, Kanji performs wiring bonding of the contacts 3 so that the elongated bonding wires 11 extend between the contacts 8 of the connection component 4 and the contacts 3 of the second microelectronic element 1. After this wire bonding step and as a result of this structure, Kanji moves the first and second microelectronic elements 6, 1 through a preselected displacement (distance  $v$  in Fig. 1C) relative to the connection component 4 so as to deform the bonding wires 11 and leads to a shape shown in Fig. 1C. Therefore, the order of the wiring bonding occurs before moving of the first and second microelectronic elements relative to the connection component.

It is noted that the applicants' arguments clearly hinged on the limitations of Claim 52 and that the dependent claims rejected above were based upon the withdrawal of the rejection on Claim 52. However, with further clarification as to the merits of the rejection of Kanji as stated above, the examiner maintains that Kanji reads on all of the limitations of Claim 52.

*Allowable Subject Matter*

7. Claims 53, 56-61, 69-71 and 73 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

NOTE: Due to a typographical error in the previous Office Action (dated 10/9/03), Claims 61 and 69-71 were not mentioned, but are now addressed on the merits in paragraph 7 above.

8. Claims 75 and 76 are allowed.

***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Dexter Tugbang whose telephone number is 703-308-7599. The examiner can normally be reached on Monday - Friday 7:00 am - 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3729

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**A. Dexter Tugbang**  
**Primary Examiner**  
**Art Unit 3729**

April 19, 2004